

DESCRIPTION OF A NEW RACE OF NOTROPIS CHALYBÆUS FROM
NEW JERSEY.

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Notropis chalybæus abbotti subsp. nov. Plate XVII (upper figure).

Cirola chalybaea Cope, Proc. Acad. Nat. Sci. Phila., 1883 (1884), p. 132. A broken dam on the Batsto river, New Jersey.

Head $3\frac{3}{4}$; depth $4\frac{2}{5}$; D. 11, 7; A. 11, 7; P. 1, 13?; V. 1, 7; scales 33 in lateral line to base of caudal; 17 scales before dorsal; 7 scales obliquely back from origin of dorsal to lateral line; 4 scales obliquely forward from origin of anal to lateral line; width of head $1\frac{7}{8}$ in its length; depth of head $1\frac{2}{7}$; snout $3\frac{1}{3}$; eye 3; maxillary $3\frac{1}{3}$; interorbital space $2\frac{3}{7}$; length of depressed dorsal 1; anal $1\frac{1}{3}$; pectoral $1\frac{2}{5}$; ventral $1\frac{1}{2}$; least depth of caudal peduncle $2\frac{1}{5}$; length of caudal peduncle, measured from base of last anal ray $1\frac{1}{8}$; caudal $3\frac{2}{5}$ in head and trunk.

Body robust, elongate, and compressed, greatest depth about tip of pectoral. Lower profile a little more convex than upper. Caudal peduncle rather stout, compressed, and its least depth about $\frac{2}{3}$ of its length.

Head rather large, robust, compressed, and somewhat conic in front. Profiles similar. Snout broad, conic, convex, and about even with jaws. Eye circular, close to upper profile, and anterior in head. Mouth small, a little oblique, and jaws about even. Lips rather fleshy. Maxillary small, barely reaching beyond posterior nostril or to front rim of orbit, and more or less concealed. Pharyngeal teeth 2, 4-4, 2, and larger ones a little hooked. Nostrils large, adjoining, near upper front of orbit, and frenum between forming a small flap over front of posterior which is a little larger.

Gill-opening extending forward within a short distance of posterior margin of orbit. Rakers few, weak, and small. Filaments well developed, also pseudobranchiæ.

Scales large, not with exposed edges narrowly imbricated, those in front of dorsal smaller and somewhat crowded in appearance. A few scales on base of caudal, fins and head otherwise naked. Lateral line decurved a little at first, and then continued more or less medianly after base of anal to base of caudal. Tubes simple.

Origin of dorsal a little nearer base of caudal than tip of snout,

second simple ray longest, and together with first and second developed rays reaching beyond others or about opposite base of last anal ray. Anal inserted well behind last dorsal ray in vertical, similar to dorsal, and reaching $\frac{3}{5}$ of space to base of dorsal. Caudal rather long, forked, and lobes pointed. Pectoral low, not reaching ventral or only about $\frac{3}{4}$ of space. Ventral placed well before dorsal, and not reaching anal.

Color in alcohol with ground-color pale brown, back and upper surface more or less dusky, becoming deeper on median line of back and each scale with a blackish-dusky edge. A broad black longitudinal band, about as wide as orbit on costal region otherwise a trifle narrower, extends from snout including front of mandible to base of caudal where it forms a spot. Above this band on side of trunk and along its upper edge ground-color is lighter like lower surface. Along base of anal a bar of dusky which fades out on lower surface of caudal peduncle. Dorsal, caudal and upper edge of pectoral pale dusky, fins otherwise whitish. Black band over opercle reflected in same color inside of gill-opening. Iris deep slaty. Peritoneum pale brownish thickly sprinkled with minute dusky dots.

Length $2\frac{5}{16}$ inches.

Type No. 19,860, A. N. S. P. A broken dam on the Batsto river, New Jersey. E. D. Cope.

Also 18 co-types, Nos. 19,861-78, A. N. S. P. Same data.

This form differs from *Notropis chalybæus* (Cope) of the Delaware in its more dusky and deeper coloration. The lateral longitudinal band is also broader throughout its course, the pectoral more dusky, and the dusky dots which are collected along the base of the anal extend along the lower surface of the caudal peduncle to the caudal. This is true of all the Batsto minnows. All of those from the Delaware comprise a large series which I collected in late spring and early summer, during 1899, in a small stream flowing into the upper end of the mill-pond at Bristol, Bucks County, Pennsylvania. These have the lateral band distinctly narrower. As yet I have not taken *Notropis chalybæus* in any other part of the Delaware basin.

(Named for Dr. Charles C. Abbott, an earnest student of the fishes of New Jersey.)

EXPLANATION OF PLATE XVII.

Notropis chalybæus abbotti Fowler.

Type No. 19,860 A. N. S. P. Batsto river, New Jersey. (Upper figure.)

Notropis chalybæus (Cope).

No. 23,983, A. N. S. P. Delaware river at Bristol, Pennsylvania. (Lower figure.)